

***I Claim:***

1 1. A method of controlling pulsed AC power that is supplied to a load wherein the  
 2 AC power has a waveform in which alternating positive and negative power  
 3 segments are separated by off segments, and wherein said load produces a reverse  
 4 emf pulse at the commencement of at least certain ones of the power segments,  
 5 comprising:

- 6 -- (a) detecting the magnitude of the reverse emf pulse at the commencement of at  
 7 least certain ones of said power segments; and  
 8 -- (b) adjusting the applied AC power being applied to the load based on the  
 detected magnitude of the reverse emf pulse.

2. The method according to Claim 1 wherein said detecting the magnitude  
 includes detecting the peak voltage of said reverse emf pulse.

3. The method according to Claim 2 wherein said detecting the magnitude  
 includes detecting the width of said reverse emf pulse.

1 4. A method of controlling pulsed AC power that is supplied to a load wherein the  
 2 AC power has a waveform in which alternating positive and negative power  
 3 segments are separated by off segments, and wherein said load produces a reverse  
 4 emf pulse at the commencement of at least certain ones of the power segments such  
 5 that there is a notch defined between the reverse emf pulse and the following  
 6 power segment, comprising:

- 7 -- (a) detecting the magnitude of the notch between the reverse emf pulse and the

8 associated power segment; and  
9 -- (b) adjusting the applied AC power being applied to the load based on the  
10 detected magnitude of said notch.

1 5. The method according to Claim 4 wherein said detecting the magnitude  
2 includes detecting the voltage depth of said notch.

1 6. The method according to Claim 1 wherein said detecting the magnitude  
2 includes detecting the width of said notch.

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